



CERTIFIED MILL TEST REPORT

Alton Steel Test Lab
25 East Street
Alton, IL 62002-9011
(618) 463-4490 Ext 3006
(618) 463-4491 Fax

BILL TO

SHIP TO

Date	11/25/2019	Customer PO	PO079851	Specifications
ASI Ord No	102225	Customer PT	R701000624	
ASI Ord Line No	1			Grade 80

Item Description

Steel Bar, Hot Rolled, 1.0000, 52' 0"

Strand Cast, RR = 62.39:1

Heat #	Yield PSI	Tensile PSI	% Elongation	% ROA	Bend Test
190664	83900	119600	17 in 2"	42	

CHEMICAL ANALYSIS TEST METHODS ASTM E-415 & E-1019

Heat #	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	Al	Nb/Cb	V	B	Ti	N	Pb	Ca
190664	0.24	1.53	0.013	0.033	0.25	0.33	0.089	0.145	0.027	0.009	0.004	0.003	0.150	0.0005	0.0009	0.0128	0.0062	0.0019

JOMINY HARDENABILITY USING ASTM A-255 CALCULATED FROM CHEMICAL DI

Heat #	GS	DI
190664	8	2.10

SPECIAL TEST RESULTS

	ASTM E-45 Method A								ASTM E-45 Method C		SAE J422		ASTM E-381			Charpy		Hardness				CE
Heat #	TA	TB	TC	TD	HA	HB	HC	HD	S	O	S	O	S	R	C			RC	RB	BHN	BHN2	
190664																					228	

ADDITIONAL COMMENTS

No mercury, lead, radium, or alpha containing material or equipment is used or deliberately added in the production of this steel. No welding or weld repairs were performed on this material. This steel is 100% electric arc furnace melted and rolled in the U.S.A. Material qualifies as NAFTA origination.

Subscribed and sworn to before me, a Notary Public, in and for the county of Madison, State of Illinois

this _____ Day of _____
My commission expires _____

(Notary Public)

Alteration or reproduction of this report, except in full, is not allowed without written approval by a representative of Alton Steel Incorporated.

I hereby certify that the above tests are correct as contained in the records of ALTON STEEL INCORPORATED

Quality Leader: Josh Levi



CERTIFIED MILL TEST REPORT

Alton Steel Test Lab
#5 Cut Street
Alton, IL. 62002-9011
(618) 463-4490 EXT 2486
(618) 463-4491 (Fax)

BILL TO

SHIP TO

Date	03/06/2017	Customer PO	076498	Specifications
ASI Ord No.	84852	Customer PT.	R701375600	SAE 15V24
ASI Ord Line Item	J			Grade 70

Item Description

Steel Bar, Hot Rolled, 1.3750, 50' 0"

Strand Cast, RR =33.00:1

Heat Number	Yield PSI	Tensile PSI	% Elongation	% ROA	Bend Test
166426	86100	125700	16 in 2"	34	

CHEMICAL ANALYSIS TEST METHODS ASTM E-415 & E-1019

Heat Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	Al	Nb/Cb	V	B	Ti	N	Ca
166426	0.23	1.53	0.015	0.028	0.25	0.23	0.074	0.157	0.027	0.010	0.003	0.005	0.152	0.0006	0.0009	0.0091	0.0001

JOMINY HARDENABILITY USING ASTM A-255 CALCULATED FROM CHEMICAL DI

Heat Number	GS	DI
166426	8	2.01

SPECIAL TEST RESULTS

ASTM E-45 Method A:										ASTM E-45 Method C:				SAE J422		ASTM E-381			Charpy		Hardness	
Heat Number	TA	TB	TC	TD	HA	HB	HC	HD	S	O	S	O	S	R	C		RC	RD	BHN			
166426																			240			

ADDITIONAL COMMENTS

No mercury, lead, radium, or alpha containing material or equipment is used or deliberately added in the production of this steel. No weld or weld repairs were performed on this material. This Steel is 100% Electric Arc Furnace Melted and Rolled in the U.S.A. Material qualifies as NAFTA origination.

Subscribed and sworn to before me, a Notary Public, in and for the county of Madison, State of Illinois

this _____ Day of _____

My commission expires _____

(Notary Public)

Alteration or reproduction of this report, except in full, is not allowed without written approval by a representative of Alton Steel Incorporated.

I hereby certify that the above tests are correct as contained in the records of ALTON STEEL INCORPORATED

Quality Leader: Josh Levi



CERTIFIED MILL TEST REPORT

Alton Steel Test Lab
#5 Cut Street
Alton, IL. 62002-9011
(618) 463-4490 EXT 2486
(618) 463-4491 (Fax)

BILL TO

SHIP TO

Date	08/06/2015	Customer PO		Specifications
ASI Ord No.	75823	Customer PT.	R701375600	SAE 15V24
ASI Ord Line Item	1			Grade 70

Item Description

Steel Bar, Hot Rolled, 1.3750, 50' 0"

Strand Cast, RR =33.00:1

Heat Number	Yield PSI	Tensile PSI	% Elongation	% ROA	Bend Test
155404	88200	123400	15 in 2"	27	

CHEMICAL ANALYSIS TEST METHODS ASTM E-415 & E-1019

Heat Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	Al	Nb/Cb	V	B	Ti	N	Ca
155404	0.26	1.54	0.014	0.025	0.24	0.27	0.075	0.121	0.023	0.011	0.004	0.004	0.154	0.0003	0.0007	0.0112	0.0016

JOMINY HARDENABILITY USING ASTM A-255 CALCULATED FROM CHEMICAL DI

Heat Number	GS	DI
155404	8	2.10

SPECIAL TEST RESULTS

ASTM E-45 Method A:										ASTM E-45 Method C:		SAE J422		ASTM E-381			Charpy		Hardness		
Heat Number	TA	TB	TC	TD	HA	HB	HC	HD	S	O	S	O	S	R	C			RC	RB	BHN	
155404																				240	

ADDITIONAL COMMENTS

No mercury, lead, radium, or alpha containing material or equipment is used or deliberately added in the production of this steel. No weld or weld repairs were performed on this material. This Steel is 100% Electric Arc Furnace Melted and Rolled in the U.S.A. Material qualifies as NAFTA origination.

Subscribed and sworn to before me, a Notary Public, in and for the county of Madison, State of Illinois

this _____ Day of _____

My commission expires _____

(Notary Public)

Alteration or reproduction of this report, except in full, is not allowed without written approval by a representative of Alton Steel Incorporated.

I hereby certify that the above tests are correct as contained in the records of ALTON STEEL INCORPORATED

Quality Leader: Josh Levi

Sold To:

Ship To:

Customer P.O.	PO078234	Sales Order	293716.2
Product Group	Merchant Bar Quality	Part Number	30001375600DFF0
Grade	A572-70 - ASTM A572-00	Lot #	DL1810608701
Size	1-3/8" (1.3750) Round	Heat #	DL18106087
Product	1-3/8" (1.3750) Round 50' A572-70	B.L. Number	C1-766868
Description	A572-70 - ASTM A572-00	Load Number	C1-447861
Customer Spec		Customer Part #	R701375600

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Roll Date: 10/7/2018 Melt Date: 11/30/2018 Qty Shipped LBS: 48,506 Qty Shipped Pcs: 192

Melt Date: 11/30/2018

C	Mn	V	Si	S	P	Cu	Cr	Ni	Mo	Cb
0.23%	1.12%	0.0730%	0.17%	0.02%	0.01%	0.07%	0.23%	0.04%	0.008%	0.003%

Roll Date: 10/7/2018

Yield 1: 70,000psi

Tensile 1: 93,000psi

Elongation: 18% in 8"(% in 203.3mm)

Yield 2: 70,000psi

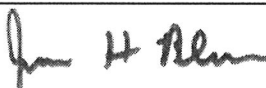
Tensile 2: 94,000psi

Elongation 18% in 8"(% in 203.3mm)

Specification Comments:

Comments: MAT'L ALSO MEETS ASTM A572 GR 60

1. WELDING OR WELD REPAIR WAS NOT PERFORMED ON THIS MATERIAL
2. MELTED AND MANUFACTURED IN THE USA
3. MERCURY, RADIUM, OR ALPHA SOURCE MATERIALS IN ANY FORM HAVE NOT BEEN USED IN THE PRODUCTION OF THIS MATERIAL



James H. Blew
Division Metallurgist

Sold To:

Ship To:

Customer P.O.		Sales Order	
Product Group	Merchant Bar Quality	Part Number	30001375600DFF0
Grade	A572-70 - ASTM A572-00	Lot #	DL1810608701
Size	1-3/8" (1.3750) Round	Heat #	DL18106087
Product	1-3/8" (1.3750) Round 50' A572-70	B.L. Number	C1-766868
Description	A572-70 - ASTM A572-00	Load Number	C1-447861
Customer Spec		Customer Part #	R701375600

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Roll Date: 10/7/2018 Melt Date: 11/30/2018 Qty Shipped LBS: 48,506 Qty Shipped Pcs: 192

Melt Date: 11/30/2018

C	Mn	V	Si	S	P	Cu	Cr	Ni	Mo	Cb
0.23%	1.12%	0.0730%	0.17%	0.02%	0.01%	0.07%	0.23%	0.04%	0.008%	0.003%

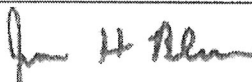
Roll Date: 10/7/2018

Yield 1: 70,000psi	Tensile 1: 93,000psi	Elongation: 18% in 8"(% in 203.3mm)
Yield 2: 70,000psi	Tensile 2: 94,000psi	Elongation 18% in 8"(% in 203.3mm)

Specification Comments:

Comments: MAT'L ALSO MEETS ASTM A572 GR 60

1. WELDING OR WELD REPAIR WAS NOT PERFORMED ON THIS MATERIAL
2. MELTED AND MANUFACTURED IN THE USA
3. MERCURY, RADIUM, OR ALPHA SOURCE MATERIALS IN ANY FORM HAVE NOT BEEN USED IN THE PRODUCTION OF THIS MATERIAL



James H. Blew
Division Metallurgist



Mill Certification

03/19/2021

MTR#:
Lot #:DL1810786401
300 STEEL MILL RD
DARLINGTON, SC 29540 US
843 393-5841
Fax: 843 395-8701

Sold To:

Ship To:

Customer P.O.		Sales Order #	
Product Group	Hot Roll - Merchant Bar Quality	Product #	3010060
Grade	A572 Gr 70	Lot #	DL1810786401
Size	1.375"	Heat #	DL18107864
BOL #		Load #	
Description	HR-MBQ RD 1.375" A572 Gr 70 50' 0" 6001-10000 lbs	Customer Part #	
Production Date	12/15/2018	Qty Shipped LBS	0
Product Country Of Origin	United States	Qty Shipped EA	
Original Item Description		Original Item Number	

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Melt Country of Origin : United States

Melting Date: 12/14/2018

Roll Country of Origin : United States

Rolling Date: 12/15/2018

C (%)	Mn (%)	P (%)	S (%)	Si (%)	Ni (%)	Cr (%)	Mo (%)	Cu (%)	V (%)	Nb (%)
0.22	1.20	0.000	0.020	0.260	0.06	0.12	0.02	0.26	0.090	0.005

Tensile testing

	Elongation in 8" (%)	Tensile (PSI)	Yield (PSI)
(1)	17.0	96000	70000
(2)	17.0	96000	70000

Comments:

inc. = Incomplete

1. Welding or weld repair was not performed on this material.
2. Melted and Manufactured in the U.S.A
3. Mercury, radium, or alpha source materials in any form have not been used in the production of this material.

Mark Schmidt, Chief Metallurgist



Mill Certification

03/19/2021

MTR#:
Lot #:DL1810786401
300 STEEL MILL RD
DARLINGTON, SC 29540 US
843 393-5841
Fax: 843 395-8701

Sold To:

Ship To:

Customer P.O		Sales Order #	
Product Group	Hot Roll - Merchant Bar Quality	Product #	3010060
Grade	A572 Gr 70	Lot #	DL1810786401
Size	1.375"	Heat #	DL18107864
BOL #		Load #	
Description	HR-MBQ RD 1.375" A572 Gr 70 50' 0" 6001-10000 lbs	Customer Part #	
Production Date	12/15/2018	Qty Shipped LBS	0
Product Country Of Origin	United States	Qty Shipped EA	
Original Item Description		Original Item Number	

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Melt Country of Origin : United States

Melting Date: 12/14/2018

Roll Country of Origin : United States

Rolling Date: 12/15/2018

C (%)	Mn (%)	P (%)	S (%)	Si (%)	Ni (%)	Cr (%)	Mo (%)	Cu (%)	V (%)	Nb (%)
0.22	1.20	0.000	0.020	0.260	0.06	0.12	0.02	0.26	0.090	0.005

Tensile testing

	Elongation in 8" (%)	Tensile (PSI)	Yield (PSI)
(1)	17.0	96000	70000
(2)	17.0	96000	70000

Comments:

inc. = incomplete

1. Welding or weld repair was not performed on this material.
2. Melted and Manufactured in the U.S.A
3. Mercury, radium, or alpha source materials in any form have not been used in the production of this material.

Mark Schmidt, Chief Metallurgist